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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/809,517

03/26/2004

Hiroyuki Takahashi

00862.017980.

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5514 7590 01/24/2008  
FITZPATRICK CELLA HARPER & SCINTO  
30 ROCKEFELLER PLAZA  
NEW YORK, NY 10112

EXAMINER

EBRAHIMI DEHKORD, SAEID

ART UNIT

PAPER NUMBER

2625

MAIL DATE

DELIVERY MODE

01/24/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/809,517	Applicant(s) TAKAHASHI ET AL.	
	Examiner Saeid Ebrahimi-dehKordy	Art Unit 2625	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-75 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7, 13, 35-75 is/are rejected.
- 7) ☒ Claim(s) 4-6, 8-12 and 14-34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

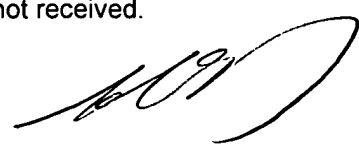
**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.



**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/10/04</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 13, 21,22, 35-36, 39-43, 48, 54-58, 60-66 and 72-75 are rejected under 35 U.S.C. 102(e) as being anticipated by Baum et al (Pub. No.: US 20050264832)

**Regarding claim 1 and 37-38, 41-43** Baum et al disclose: A method suitable for an image forming system (note Fig.2A) which comprises a plurality of devices (note Fig.4A, items 320, 330, 340 and 350) including at least one of an image forming device (note Fig.4A, item 340) which can print data in a storage unit that can store data of a plurality of jobs including data of a first job and data of a second job which is input after the data of the first job (note Fig.4A, item 340 that prints the print jobs received and archived from the image archival database 330, note page 7, paragraph 0087) and a sheet processing device which can execute a sheet process for a sheet printed by the image forming device (note Fig.4A, wherein the photo-finisher would process the printed images and distributes them through the distributor system, page 8, paragraph 0094) comprising: a scheduling control step (note page 10, paragraph 0110, lines 9-11) suited to set a schedule associated with a plurality of work flows (note page 10, paragraph 0111) including a first work flow that includes a plurality of process steps (note page 10 paragraph

0111, wherein the different work order as sub-order would be schedule to be sent to the finisher) using a plurality of devices of the image forming system required to complete the first job (note again Fig.4A, wherein the receiving section would transfer the jobs to the print lab which would implement the print job as needed, page 7, paragraphs 0086-0088) and a second work flow that includes a plurality of process steps using a plurality of devices of the image forming system required to complete the second job (note Fig.4A, paragraphs 0086-0088) and an instruction step suited to selectively input a plurality of instructions including first and second instructions (note page 7, paragraph 0087, lines 5-9) Wherein the scheduling control step includes a step of setting when the first instruction is input, a first schedule which is scheduled to complete the second work flow for the second job input after the first job (note page 12, paragraph 00124, lines 24-27, wherein the scheduler would schedule the sub-orders) after completion of the first work flow for the first job (note that the schedule “algorithm” would set the job in order) and a step of setting when the second instruction is input, a second schedule which is scheduled to complete the second work flow for the second job input after the first job before completion of the first work flow for the first job (note where in the schedule algorithm would schedule the second sub-order after the first sub-order by the definition of the algorithm).

**Regarding claim 2** Baum et al disclose: The method according to claim 1, wherein the instruction step includes a step of inputting a third instruction, and the scheduling control step includes a step of setting, when the third instruction is input, a third schedule which is scheduled to execute a work flow in consideration of cost upon processing a job in the image forming system (note that the schedule “algorithm” would set the job in order).

**Regarding claim 3** Baum et al disclose: The method according to claim 1, wherein the

instruction step includes a step of inputting a fourth instruction, and the scheduling control step includes a step of setting, when the fourth instruction is input, a fourth schedule which is scheduled to execute a work flow in consideration of quality upon processing a job in the image forming system (note that the schedule “algorithm” would set the job in order, note, wherein the schedule algorithm would schedule the second sub-order after the first sub-order by the definition of the algorithm).

**Regarding claim 7** Baum et al disclose: the method according to claim 1, further comprising a memory control step of storing the schedule information set in the scheduling control step in a memory (note Fig.4, paragraphs 008-0088).

**Regarding claim 13** Baum et al disclose: The method according to claim 1, wherein the scheduling control step includes a step of setting a schedule suited to execute a work flow including a plurality of process steps using the plurality of devices, and an operator intervention work (note Fig. 4A, paragraphs 0086-0088, also note that the schedule “algorithm” would set the job in order, note, wherein the schedule algorithm would schedule the second sub-order after the first sub-order by the definition of the algorithm).

**Regarding claim 21.** The method according to claim 1, wherein the image forming device comprises an interrupt print function which interrupts a print job, a print process of which is in progress, and can execute a print process of another print job, and said method further comprises a device control step of inhibiting execution of the interrupt print function, when the first schedule is set in the scheduling control step and when the image forming system is not ready to complete the second work flow for the second job input after the first job, after completion of the first work flow for the first job (note Fig. 4A, paragraphs 0086-0088, also note that the schedule

“algorithm” would set the job in order, note, wherein the schedule algorithm would schedule the second sub-order after the first sub-order by the definition of the algorithm).

**Regarding claim 22** Baum et al disclose: The method according to claim 1, wherein the image forming device comprises an interrupt print function which interrupts a print job, a print process of which is in progress, and can execute a print process of another print job, and said method further comprises a device control. step of permitting execution of the interrupt print function, when the first schedule is set in the scheduling control step and when the image forming system is ready to complete the second work flow for the second job input after the first job, after completion of the first work flow for the first job (note Fig. 4A, paragraphs 0086-0088, also note that the schedule “algorithm” would set the job in order, note, wherein the schedule algorithm would schedule the second sub-order after the first sub-order by the definition of the algorithm).

**Regarding claim 35** Baum et al disclose: The method according to claim 1, wherein the scheduling control step includes a step of scheduling work flows of a plurality of jobs which include any of a job of data output from a computer, a job of data output from a scanner, a job of data output from a digital camera, and a job of data output from a storage medium (note page 8, paragraph 0095).

**Regarding claim 36** Baum et al disclose: The method according to claim 1, wherein the scheduling control step includes a step of setting a schedule of work flows using data suitable for a JDF (Job Definition Format) format (note page 2, paragraph 0016).

**Regarding claim 39** Baum et al disclose: storage medium storing a program of claim 38 (note the rejection of claim 38).

**Regarding claim 40, 55 and 73** Baum et al disclose: An image forming system comprising: job

acceptance means for accepting a print job and a print instruction (note Fig.4A, paragraph 0086-0087) and a plurality of step control means for respectively controlling a plurality of steps for the print job (note Fig.6, steps taking to implement the print job, page 10, paragraphs 0107-0119) scheduling means for scheduling the steps and process control means for managing the steps on the basis of a scheduling result of said scheduling means (note page 6, paragraphs 0051-0052).

**Regarding claim 46** Baum et al disclose: The system according to claim 40, wherein said scheduling means schedules the steps on the basis of an acceptance order of print jobs by said job acceptance means (note page 7, paragraph 0086-0087).

**Regarding claim 48** Baum et al disclose: The system according to claim 40, wherein said scheduling means schedules the steps while giving priority to cost of the print job (note page 9, paragraph 0105).

**Regarding claim 54** Baum et al disclose: The system according to claim 40, wherein said job acceptance means accepts the print job and print instruction via a service using a Web browser via the Internet (note page 9, paragraphs 0100-0101).

**Regarding claim 56** Baum et al disclose: A program for implementing a method of controlling an image forming system of claim 55 (note rejection for claim 55).

**Regarding claim 57** Baum et al disclose: A storage medium computer-readably storing a program for implementing a method of controlling an image forming system of claim 55 (note rejection for claim 55).

**Regarding claim 58** Baum et al disclose: An image forming system which can execute an image forming process including a plurality of steps, comprising: process control means for managing the plurality of steps and issuing work instructions to workers who execute works (note Fig.4A,

wherein the job is received by the receiving computer and the send to the print lab to be implemented by going through the different sets of processing and execution, page 7, paragraphs 0086-0088).

**Regarding claim 60** Baum et al disclose: The system according to claim 58, further comprising worker identification means for identifying the workers who execute works, and wherein said process control means issues the work instructions to the workers identified by said worker identification means (note pages 9&10, paragraph 0105).

**Regarding claim 61** Baum et al disclose: The system according to claim 58, further comprising scheduling means for scheduling the works of the workers who execute works for respective steps, and wherein said process control means issues the work instructions to the workers who execute works on the basis of a scheduling result of said scheduling means (note Fig.4A, wherein the job is received by the receiving computer and the send to the print lab to be implemented by going through the different sets of processing and execution, page 7, paragraphs 0086-0088).

**Regarding claim 62** Baum et al disclose: The system according to claim 60, further comprising scheduling means for scheduling the works of the workers identified by said worker identification means for respective steps (note Fig.4A, wherein the job is received by the receiving computer and the send to the print lab to be implemented by going through the different sets of processing and execution, page 7, paragraphs 0086-0088, note that all the devices on the printing lab must be designated by the IP address which would be contacted through).

**Regarding claim 63** Baum et al disclose: The system according to claim 58, further comprising job acceptance means for accepting a print job and a print instruction, and wherein the plurality



of steps include a pre-print process step that applies a pre-print process to the print job accepted by said job acceptance means in accordance with the print instruction, a print process step that applies a print process to the print job that has undergone the pre-print process, and a post-print process step that applies a post-print process to the print job that has undergone the print process (note Fig.4A, wherein the job is received by the receiving computer and the send to the print lab to be implemented by going through the different sets of processing and execution, page 7, paragraphs 0086-0088, also note wherein the print lab or photo-finish lab would do the processing of the files and then the distribution system would implement the post-printing process).

**Regarding claim 64** Baum et al disclose: The system according to claim 58, further comprising job acceptance means for accepting a print job and a print instruction, and wherein the plurality of steps include an edit process step that applies an edit process to the print job accepted by said job acceptance means in accordance with the print instruction, a proof process step that applies a proof process to the print job that has undergone the edit process, a print process step that applies a print process to the print job that has undergone the proof process, a finishing process step that applies a finishing process to the print job that has undergone the print process, and a delivery process step that applies a delivery process to the print job that has undergone the finishing process (note Fig.4A, wherein the job is received by the receiving computer and the send to the print lab to be implemented by going through the different sets of processing and execution, page 7, paragraphs 0086-0092, also note wherein the print lab or photo-finish lab would do the processing of the files and then the distribution system would implement the post-printing process).

**Regarding claim 65** Baum et al disclose: The system according to claim 58, further comprising: job acceptance means for accepting a print job and a print instruction; and image scanning means for scanning image data from a paper document, and wherein the plurality of steps include an edit process step that applies an edit process to the print job accepted by said job acceptance means or a print job based on the image data scanned by said image scanning means in accordance with the print instruction, a proof process step that applies a proof process to the print job that has undergone the edit process, a print process step that applies a print process to the print job that has undergone the proof process, a finishing process step that applies a finishing process to the print job that has undergone the print process, and a delivery process step that applies a delivery process to the print job that has undergone the finishing process (note page 8&9, paragraphs 0096-0097, also note Fig.4A, wherein the job is received by the receiving computer and the send to the print lab to be implemented by going through the different sets of processing and execution, page 7, paragraphs 0086-0092, also note wherein the print lab or photo-finish lab would do the processing of the files and then the distribution system would implement the post-printing process).

**Regarding claim 66** Baum et al disclose: The system according to claim 60, wherein said worker identification means comprises an ID card which stores information including a worker's name, identification number, department name, skill, and work history (note Fig.4, page 7, paragraphs 0086-0088).

**Regarding claim 72** Baum et al disclose: The system according to claim 58, further comprising a plurality of step control means for respectively controlling the plurality of steps, and wherein said step control means and said process control means communicate with each other using a

JDF (Job Definition Format) format (note page 2, paragraph 0016).

**Regarding claim 74** Baum et al disclose: A program for implementing a method of controlling an image forming system of claim 73 (note rejection for claim 73).

**Regarding claim 75** Baum et al disclose: A storage medium computer-readably storing a program for implementing a method of controlling an image forming system of claim 73 (note rejection for claim 73).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 44-46, 49-50, 59 and 67-71 rejected under 35 U.S.C. 103(a) as being unpatentable over Baum et al (Pub. N0: US 20050264832) in view of Gotoh et al (Pub. No: US 20020057455)

**Regarding claim 44** Baum et al do not clearly disclose: The system according to claim 40, further comprising display means for displaying the schedule of the steps managed by said process control means, and times required for the steps. On the other hand Gotoh et al disclose: The system according to claim 40, further comprising display means for displaying the schedule of the steps managed by said process control means, and times required for the steps (note abstract, also note page 5, paragraph 0090 and page 6, paragraph 0110).

**Regarding claim 45** Gotoh et al disclose: The system according to claim 40, further comprising selection means for selecting one or a plurality of modes from a plurality of scheduling modes, and said scheduling means schedules the steps on the basis of the one or plurality of scheduling

modes selected by said selection means (note Fig.9, deputy or parallel print mode is set, page 4, paragraph 0067).

**Regarding claim 49** Gotoh et al disclose: The system according to claim 40, wherein said scheduling means schedules the steps while giving priority to quality of the print job (note page 1, paragraph 0008).

**Regarding claim 50** Gotoh et al disclose: The system according to claim 40, wherein said scheduling means schedules the steps while giving priority to optimization or operating efficiency of said image forming system (note page 1, paragraph 0008).

**Regarding claim 59** Gotoh et al disclose: The system according to claim 58, further comprising display means for displaying the work instructions from said process control means (note page 4, paragraph 0072 and page 6, paragraph 0110).

**Regarding claim 67** Gotoh et al disclose: The system according to claim 59, wherein said display means comprises a display unit of a device used by each worker in each step (note abstract, also note page 5, paragraph 0090 and page 6, paragraph 0110).

**Regarding claim 68** Gotoh et al disclose: The system according to claim 67, wherein the display unit of a device used by each worker in each step includes a display unit of a computer, a display unit of a printing device, and a display unit attached to a cart or the like (note abstract, also note page 5, paragraph 0090 and page 6, paragraph 0110).

**Regarding claim 69** Gotoh et al disclose: The system according to claim 59, wherein said display unit comprises a display unit of a portable terminal which can be carried by each worker (note page 2, paragraph 0043).

**Regarding claim 70** Gotoh et al disclose: The system according to claim 59, wherein the

portable terminal can wirelessly receive the work instruction from said process control means (note page 2, paragraph 0043 and 0046).

**Regarding claim 71** Gotoh et al disclose: The system according to claim 69, further comprising worker identification means for identifying the workers who execute works, and wherein the portable terminal acquires identification information from said worker identification means and wirelessly informs said process control means of the acquired identification information (note page 2, paragraph 0043).

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 47 and 51-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baum et al (Pub. No: US 20050264832) in view of Gotoh et al (Pub. No: US 20020057455) and further in view of Patton (Pub. No: US 20020118387)

**Regarding claim 51** Neither Baum et al nor Gotoh et al would clearly disclose: The system according to claim 45, wherein the plurality of scheduling modes include a print job acceptance order priority mode, print job priority mode, print job cost priority mode, print job time schedule priority mode, image forming system optimization priority mode, and image forming system operating efficiency priority mode. On the other hand Patton discloses: The system according to claim 45, wherein the plurality of scheduling modes include a print job acceptance order priority mode, print job priority mode, print job cost priority mode, print job time schedule priority mode, image forming system optimization priority mode, and image forming system operating

efficiency priority mode (note Fig.4, page 2, paragraph 0018-022).

**Regarding claim 52** Patton discloses: The system according to claim 45, wherein said selection means can re-select even after scheduling by said scheduling means (note Fig.4, page 2, paragraph 0018-020).

**Regarding claim 53** Patton discloses: The system according to claim 40, wherein said scheduling means checks a schedule or schedules of one or a plurality of already scheduled jobs upon scheduling a print job accepted by said job acceptance means, and re-schedules the steps of the accepted job and the one or plurality of already scheduled jobs when the schedule or schedules of the one or plurality of already scheduled jobs can be changed (note Fig.4, page 2, paragraph 0018-022).

**Regarding claim 47** Patton discloses: The system according to claim 40, wherein said scheduling means schedules the steps while giving priority to a delivery date of the print job (note Fig.4, page 2, paragraph 0018-022).

***Claim Rejections - 35 USC § 101***

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 38-39, 56 and 74 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim a program embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally

interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized” – Guidelines Annex IV). That is, the scope of the presently claimed a program can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on “computer-readable medium” or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

***Allowable Subject Matter***

8. Claims 4-6, 8-12, 14-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**CONTACT INFORMATION**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saeid Ebrahimi-dehKordy whose telephone number is 571-272-7462. The examiner can normally be reached on Mon-Fri, 8:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, David Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Saeid Ebrahimi  
Patent Examiner  
Group Art Unit 2625  
January 16, 2008

